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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,636	06/26/2000	Yuichi Futa	NAK1-BL53	3314

21611 7590 04/26/2005  
SNELL & WILMER LLP  
1920 MAIN STREET  
SUITE 1200  
IRVINE, CA 92614-7230

EXAMINER
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KIM, JUNG W

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding..

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

09/603,636

Applicant(s)

FUTA, YUICHI

Examiner

Jung W. Kim

Art Unit

2132

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 06 April 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_  
Claim(s) objected to: 2, 4-24, 26 and 28-32.  
Claim(s) rejected: 1 and 25.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_.

  
GILBERTO BARRÓN Jr.  
SUPERVISORY PATENT EXAMINER

TECHNOLOGY CENTER 2100

Continuation of 5. Applicant's reply has overcome the following rejection(s): Applicant's argument regarding the 101 and 112, second paragraph rejections of claims 1-2, 4-26, and 28-32 (pgs. 28-29), have been fully considered and is persuasive, hence the rejections are withdrawn.

Continuation of 7. the step of performing one of: secret communication by encryption and decryption; digital signature generation and verification; and data conversion including encoding and decoding of data, by using the solution of the system of linear equations  $Ax=b$  is taught by Shamir U.S. Patent No. 5,375,170. The motivation to solve  $Ax=b$  as taught by Curtis for the purpose of a cryptographic method is consistent with the motivation given in the rejections of claims 1 and 25 in the Office action dated December 20, 2004, paragraph 11.

Continuation of 11. does NOT place the application in condition for allowance because: Regarding applicant's argument that Curtis describes transformation using elementary row operations using division on the finite field  $GF(p)$  and hence does not teach the negative limitation, examiner respectfully disagrees. In the disclosure of Curtis, row operation is never discussed in terms of division: the basis of all operations on matrices are defined only by means of a "sum" or "multiplication". Curtis, pg. 88, section 12 "Addition and Multiplication of Matrices". Furthermore, the theorems to derive the context of row operation are built on the properties of addition and multiplication, and not on division. Applicant's demonstration wherein division operations show a similar reduction to matrix A on pg. 95 is not persuasive: the corresponding action is derived by multiplication. For example, the coefficients 2 and -1 are multiplied by  $1/2$  to achieve the coefficients 1 and  $-1/2$ .

Regarding applicant's argument that exercise 3 of Curtis does not satisfy the recitation of the solving step in claims 1 and 25, examiner respectfully disagrees. The exercise follows discussion of a system of linear equations  $Cx=d$  using the generated coefficient matrix C, the generated constant vector d, and the calculated inverses of the diagonal elements of the generated coefficient matrix C, to thereby solve the system of linear equations  $Ax=b$  of the coefficient matrix A and the constant vector b (Curtis, section 12), hence one of ordinary skill in the art would deduce these factors to solve the system of linear equations  $Ax=b$ .